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William John Gallagher

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EXAMINER

NGUYEN, PHILLIP H

ART UNIT

PAPER NUMBER

2191

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,384	Applicant(s) GALLAGHER, WILLIAM JOHN	
	Examiner Phillip H. Nguyen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10-13, 16-18 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10-13, 16-18 and 25-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

/Wei Zhen/

Supervisory Patent Examiner, Art Unit 2191 DETAILED ACTION

1. This action is in response to the amendment filed 12/19/2007.
2. Claims 2-9, 14-15, and 19-24 have been canceled; Claim 1 has been amended.

Response to Amendment

3. The objection to the specification for introducing new matter into the disclosure of previous action is withdrawn in view of Applicant's amendment.
4. The rejections to claims 3 and 10-13 under 35 U.S.C. 112, first paragraph of previous action are withdrawn in view of Applicant's amendment.

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 contains the trademark or trade name JAVA. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or

trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark or trade name is used to identify or describe a family of products generated in the proprietary programming language call JAVA and accordingly, the identification or description is indefinite.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1, 12, 16, 17, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bentley et al. (United States Patent No.: 5,815,415).

As per claim 1:

Bentley teaches:

creating a class file container object that stores source code describing a class

(see at least Figures 5-7; also see at least col. 12:51-53 "**In the programming language**

53, a class declaration defines a class 54..."; col. 13:30-38 "**class StormDoor :**

Door..."; col. 14:64-67 "**A template 58 provides a flexible programming language**

technique for declaring classes 54...";

adding a first source code defining a method to the class stored in the class file container object (see at least Figures 5-7; also see at least col. 12:42-44 "**a class 54 defines member variables 60 (i.e. types of data) common to each object 52 and methods 62 (i.e. functions) that operate on the member variables 60**"; also see col. 13:1-5 "**//Declare methods...**"), wherein creating a class file container object includes selecting a class name and a super class for the class (see at least col. 13:16-25 "**Classes 54 may be derived from other classes 54...For example, a "StormDoor" class may be derived from the Door class...In such case, Door is a "base class" (i.e. super class or parent class)...**");

adding a second source code into the method in the class stored in the class file container object (see at least Figures 5-7; also see at least col. 12:42-44 "**a class 54 defines member variables 60 (i.e. types of data) common to each object 52 and methods 62 (i.e. functions) that operate on the member variables 60**"; also see col. 13:1-5 "**//Declare methods...**");

repeating instructions b and c to populate the class stored in the class file container object (see at least Figure 6 – **There are more than one methods have been declared for the new class 54**);

generating a tree of statement and expressions based on the class stored in the class file container object (see at least Figures 25-26);

using the tree of statements and expressions to generate byte code for the class (see at least col. 31:44 "**the source code is compiled into run-time code that may be executed on any platform 19 having an appropriately configured run-time virtual**

machine”; col. 34:49-50 **“each program 96 is compiled into an efficient byte code format such as p-code (i.e. pseudo-code)”**); and

instantiating an instance of the new class file object (see at least col. 12:37-40 **“a class 54 is part of a schema 50 and defines an object 52 that may be instantiated from the class 54...”**);

wherein the computer program product can generate code for any type of JAVA program (see at least col. 31:40-57 **“Run-Time Virtual Machine”**).

As per claim 12:

Bentley further teaches:

repeatedly adding a method to the class stored in the class file container object for teach method associated with a stub generated for a remote object (see at least Figures 6 – **There are more than one methods have been declared for the new class 54. Therefore, repeatedly adding methods to the new class is inherent in order to fulfill the purpose of declaration of new class**).

As per claim 16:

Bentley further teaches:

wherein the tree of statements and expressions represents at least one method, the at least one method comprising at least one of: a code statement, an expression, a variable and a programming construct (see at least Figures 25-26).

As per claim 17:

Bentley further teaches:

wherein the tree of statements and expressions forms a known structure or interface when the class is a known type (see at least col. 12:62 “Door”; col. 14:66 “Shell”).

As per claim 26:

Bentley further teaches:

wherein dynamically generated code exists for the life of a server it resides upon
(it is inherent in order to fulfill the purpose of runtime class generation).

As per claim 27:

Bentley further teaches:

generating executable code from the byte code by using a class loader (see at least col. 38:25-26 “a loader must convert the data to the format required for the platform 19 where the program 96 will run”).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (United States Patent No.: 5,815,415), in view of Click, Jr. et al. (United States patent No.: US 6,381,737).

As per claim 10:

Bentley does not explicitly teach:

wherein the computer code implements an adaptor class.

However, Click, Jr. teaches:

wherein the program code implements an adaptor class (see at least col. 3:20-21

"The computer code also generates an adapter when requested by the runtime system in order to execute the bytecode").

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Bentley's approach to dynamically build an adapter class as taught by Click, Jr. One would have been motivated to generate an adapter class as taught by Click, Jr. to execute the generated byte code.

As per claim 18:

Bentley in combination with Click, Jr. teaches all the limitations of the base claim, furthermore, Bentley in combination with Click, Jr. further teaches:

wherein the tree of statements and expressions forms a known structure when the class is at least one of an adapter and a proxy type (see Click, Jr. at least col. 3:20 "an adapter").

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (United States Patent No.: 5,815,415), in view of Glynias et al. (United States Patent No.: 6,125,383).

As per claim 11:

Bentley does not explicitly teach:

wherein the computer code implements a proxy class.

However, Glynias teaches:

wherein the computer code implements an adaptor class (see at least col. 15:35-

36 **“The client 110 would invoke a Java applet to create a proxy object, called “DNA Sequence ADH_Human”**”).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Bentley's approach to dynamically create a proxy class as taught by Glynias. One would have been motivated to modify because proxy class can be used to create another object (see Glynias at least col. 15:40-45).

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (United States Patent No.: 5,815,415).

As per claim 13:

Bentley does not explicitly teach:

wherein the computer code for repeatedly adding a method to the class stored in the class file container object for each method associated with a stub generated for a remote object includes program code for:

determining a number of methods associated with the stub in a remote interface.

However, official notice is taken that determine the number of methods is well known to the art at the time the invention was made and modify Bentley's approach to count the number of method declared for the class by using a counter variable. One would have been motivated to modify because using a counter variable to count the number of methods added to the class provides an indication when it reaches the end of the adding iteration loop.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley et al. (United States Patent No.: 5,815,415), in view of Whitehead et al. (United States Patent No.: 6,085,030).

As per claim 25:

Bentley does not explicitly teach:

wherein the dynamically generated code is used for remote method invocation skeletons, remote method invocation stubs, wrappers for database connections, and proxies used to enforce call-by-value semantics.

However, Whitehead teaches the use of RMI, JDBC, and proxies “...**RMI, i.e., proxy/skeleton interaction**” (see col. 7:29) and “**ODBC/JDBC compliant databases**” (see col. 7:67).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Bentley's approach to use RMI, JDBC, and proxy for remote communication with other JAVA objects and intercepting calls between JAVA objects. One would have been motivated to modify in order to improve convenience, compatibility or security.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN
3/5/2008

/Wei Zhen/

Supervisory Patent Examiner, Art Unit 2191